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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,624	06/30/2000	Stephen Jourdan	2207/8609	9451

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EXAMINER

TSAI, HENRY

ART UNIT

PAPER NUMBER

2183

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,624

Applicant(s)

JOURDAN ET AL.

Examiner

Henry W.H. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-20,22-30 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-20,22-30 and 38-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

***Response to Appeal Brief***

1. In view of the Appeal Brief filed on 6/28/05, PROSECUTION IS HEREBY REOPENED. The Office Action with the new ground(s) of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-3, 20, and 22-27 are rejected under 35 U.S.C. 101

because the claimed invention is directed to non-

statutory subject matter.

The claims recite nothing more than a nonstatutory subject matter.

Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, Schrader, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data (See MPEP section 2106, IV, B, 1).

Note the claimed invention, a memory entry, can be defined as a unit of space where information can be stored and retrieved, such as, broadly and reasonable interpreted, pages of a note book; and "a trace" can be interpreted such as a "line" or a "path". Therefore, the examiner submits that the claims are

- 1) not tangibly embodied on a computer readable medium; and
- 2) non-functional descriptive material; data per se is non-statutory-- this claim fails to recite the necessary

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functional interrelationship within the architecture to  
constitute a data structure.

***Claim Objections***

4. Claims 4-7 are objected to because of the following informalities:

in claim 4, line 2, it is suggested to insert -and- after ";", and in line 5, it is suggested to insert -and- after ","; and

in claim 15, line 2, it is suggested to insert -extended- after "selected".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-3, 4-7, 9-19, 20, 22-30, and 38-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear how a trace can have a multi-entry and single exit. Note a trace is a sequence of program instructions. The flow of a program can only have an entry in a trace. Some more detailed descriptions are missing. Similar problems exist in claim 38.

In claim 3, "terminal instruction" was not well defined. It appears that the relationship between "single exit" and the "terminal instruction" needs to be defined. Similar problems exist in such as claims 9, 11, 22, and 30.

In claim 4, lines 6 and 7, it is not clear how to define "complex blocks" and "block prefixes" since the structural relationship between "complex blocks", "block prefixes", and the front-end system was not defined.

In claim 6, it is not clear what is meant by "blocks having a multiple-entry, single exit architecture" since the range of the blocks was not defined. Similar problems exist in claims 16, and 17.

In claim 20, lines 3-4, it is not clear how a program flow can progress from any instruction in the program. As set forth

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above, The flow of a program can only have an entry. Similar problems exist in claim 28.

In claim 22, line 2, it is not clear whether "terminal instruction" is the same as "last instruction" mentioned in claim 20, line 3. If so, the terms need to be consistent.

In claim 23, line 2, it is not clear how to define "a last instruction therein" since there exist many last instructions in the memory.

Applicant is required to review the claims and correct all language which does not comply with 35 U.S.C. § 112, second paragraph.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of

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section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-3, and 38-40 as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kaylor (U.S. Patent No. 5,492,276), hereinafter referred to as Kaylor'276.

Referring to claim 1, Kaylor'276 discloses as claimed: apparatus (see Fig. 5), comprising: a memory entry (10, see Fig. 1), storing a trace (the path of the waterway 20, see Figs. 1 and 5) having a multiple-entry (from 25, 26, 27 see Fig. 1, and 52 and 53 see Fig. 4), single exit (79 along the exit axis 23, see Fig. 5) architecture. Note apparatus (see Fig. 5) is best reasonably and broadly interpreted as a memory entry to comprise many water traces. Note claims 38 recites the corresponding limitations as set forth in claim 1 above.

As to claims 2, and 39 Kaylor'276 also discloses: the trace being a complex trace (the path of the waterway 20, see Figs. 1 and 5) having multiple independent prefixes (such as 61, 62 as



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shown in Fig. 5) and a common, shared suffix (the race along the exit axis 23 as shown in Fig. 5).

As to claims 3, and 40, Kaylor'276 also discloses: the entry (10, see Fig. 1) is indexed by an address (reasonably and broadly interpreted as a mark, a model NO., or a serial No. of the apparatus 10) of a terminal instruction (reasonably and broadly interpreted such as a user's manual) therein.

9. Claims 1, 2, 16, 20, 28, 29, 38, and 39, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Agarwal (U.S. Patent No. 5,966,541), hereinafter referred to as Agarwal'541.

Referring to claim 1, Agarwal'541 discloses as claimed: a memory entry (the space containing blocks 101, 102 and 103 as shown in Fig. 8; Note a memory entry is best broadly and reasonable interpreted as a space where information can be stored and retrieved), storing a trace (including blocks 101, 102 and 103 as shown in Fig. 8) having a multiple-entry (from I2 to I3 and from I2 to I5, see Fig. 8), single exit (from I9 in block 103, see Fig. 8) architecture. Note Fig. 8 is best reasonably and broadly interpreted as to comprise many traces such as from block 101 to block 103 and from block 102 to block

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103 as shown in Fig. 8. Note claim 38 recites the corresponding limitations as set forth in the claim 1.

Referring to claim 16, Agarwal'541 discloses as claimed: A processing engine (certainly existing in Agarwal'541's system), comprising: a front end stage to store blocks (in memory 703, see Fig. 11, and Col. 11, line 36), including blocks 101, 102 and 103 as shown in Fig. 8) of instructions in a multiple-entry (from I2 to I3 and from I2 to I5, see Fig. 8), single exit (from I9 in block 103, see Fig. 8) architecture when considered according to program flow, and an execution unit (certainly existing in Agarwal's system) in communication with the front end stage.

Referring to claim 20, Agarwal'541 discloses as claimed: apparatus, comprising a memory entry to store (in memory 703, see Fig. 11, and Col. 11, line 36) a sequence of program instructions (from I3 to I9 see Fig. 8) as a trace (including blocks 101, 102 and 103 as shown in Fig. 8), the instructions defining a program flow that progresses (note Fig. 8 shows the program flow progresses instruction to instruction) from any instruction (instructions from I3 to I8 see Fig. 8) therein to a last instruction (last instruction I9 see Fig. 8) in the trace and in which the trace has multiple separate prefixes (block 101 and block 102 are the prefixes as shown in Fig. 8).

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Referring to claim 28, Agarwal'541 discloses as claimed: a trace (including blocks 101, 102 and 103 as shown in Fig. 8), comprising a sequence of program instructions (from I3 to I9 see Fig. 8) stored together (in memory 703, see Fig. 11, and col. 11, line 36) assembled in order according to program flow, the sequence having a multiple-entry (from I2 to I3 and from I2 to I5, see Fig. 8), single exit (from I9 in block 103, see Fig. 8) architecture. Note as set forth above, Fig. 8 is best reasonably and broadly interpreted as to comprise many traces such as from block 101 to block 103 and from block 102 to block 103 as shown in Fig. 8.

As to claims 2, 29 and 39, Agarwal'541 also discloses: the trace being a complex trace (including blocks 101, 102 and 103 as shown in Fig. 8) having multiple independent prefixes (block 101 and block 102 as shown in Fig. 8) and a common, shared suffix (block 103 is the as shown in Fig. 8).

**Response to Arguments**

10. Applicant's arguments mailed 6/28/05 have been considered but are moot in view of the new ground(s) of rejection

**Contact Information**

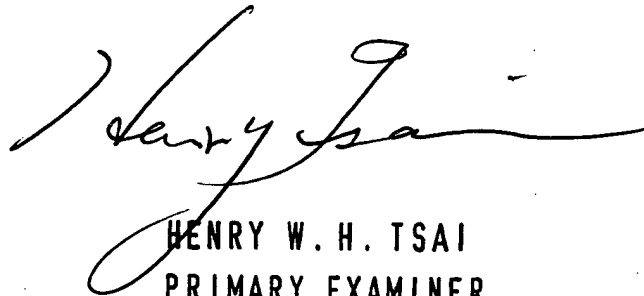
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (571) 272-4176. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Eddie Chan, can be reached on (571) 272-4162. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC central telephone number, 571-272-2100.

12. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into the Group at fax number: 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by

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applicants who authorize charges to a PTO deposit account.

Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.



HENRY W. H. TSAI  
PRIMARY EXAMINER

September 19, 2005